

Koch, Kristine

From: PETERSON Jenn L <PETERSON.Jenn@deq.state.or.us>
Sent: Friday, July 11, 2014 12:52 PM
To: Koch, Kristine; Shephard, Burt
Subject: RE: Portland Harbor PRG DDX Problem

Hi Kristine,

The confusion may be that for DDE it is ingested dietary dose compared with dietary TRVs (which protect reproduction & egg / growth), that shows risk in the BERA. You are correct that measurements of osprey bird eggs directly did not show a risk. I am including responses to some of our earlier exchange that I sent to Tom a while back. I hope this helps clarify, but I would be happy to discuss further if needed. The important take home message is that for birds, using a DDX PRG is not more conservative than using a DDE PRG. An avian TRV for DDE, as calculated by Burt, protective of piscivorous birds such as osprey, kingfisher, etc. would solve the problem. I believe LWG had an avian PRG for DDE previously.

It is unclear why both the total DDX and the DDE PRGs are removed for Piscivorous wildlife. **The Final BERA concluded that there is not a risk to Piscivorous wildlife from DDE or DDX. Risk is shown in the BERA from DDE to the sandpiper and Kingfisher to the 1 mile segment around ARKEMA, and to osprey for the dietary line of evidence. Given the uncertainty relying only on measured egg concentrations, and the inability to rely on the osprey / egg line to cover the dietary risk for all birds, DDE risk should be considered. DDE tissue concentrations in fish should be around 0.6 - 2 mg/kg ww for protection of populations of piscivorous birds; concentrations in the river are well above this, esp. in the vicinity / downstream of ARKEMA. The use of only the DDX value allows for up to 10 ppm in fish tissue.**

Additionally, there may be confusion between the use of DDX and DDE acceptable risk levels. Examining DDX instead of DDE should be conservative in incorporating assumptions about the transformation of DDT to DDE in the environment / body of the bird. However, the while the DDX TRV is used in the risk assessment is underconservative for piscivorous birds (based only on terrestrial birds), the DDE TRV used was appropriate. Therefore, DEQ recommends using the DDE PRGs for sediment protective of these pathways from the risk assessment. If conversion from DDX to DDE is to be incorporated, the DDE PRG in sediment can be applied to a DDX concentration in the sediment to correct for this problem.

It is a concern not to have risk numbers / PRGs based on piscivorous birds when examining the DDE concentrations around the ARKEMA site. Without appropriate bird PRGs, benthic risk (e.g. DDX levels set based on bioassay testing) is going to be the only ERA risk driver in this 1 mile segment of the Site.

The belted kingfisher shows a risk to Sum DDE in the final risk assessment. Given this receptor is in EPA's PRG table, DEQ advocates including a Sum DDE PRG for the kingfisher. **The RBT for the kingfisher for DDX (not DDE) is 182 ug/kg. This has been added to the table. Risk to DDE is shown in the risk assessment (e.g. from Table 8-39 / 8-40 and 11-3 of the risk assessment, Total DDE is identified with a HQ>1). Considering the TRV used for DDX is considerable higher than the DDE TRV and may not be protective of these effects, DEQ recommends using the DDE estimates of risk / PRGs going forward.**

From: Koch, Kristine [mailto:Koch.Kristine@epa.gov]
Sent: Friday, July 11, 2014 11:35 AM

To: PETERSON Jenn L; Shephard, Burt
Subject: RE: Portland Harbor PRG DDX Problem

Jen – not sure what you're saying. Burt's response was for the site-wide RI/FS (as he termed "in-water") and was not specific to any media. Did you want DDE for the bird or the bird egg. Burt told me bird egg, but there is no risk for that assessment pathway from DDE.

For aluminum, I'll include whatever is the current value as ARAR.

Kristine Koch
Remedial Project Manager
USEPA, Office of Environmental Cleanup

U. S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900, M/S ECL-115
Seattle, Washington 98101-3140

(206)553-6705
(206)553-0124 (fax)
1-800-424-4372 extension 6705 (M-F, 8-4 Pacific Time, only)

From: PETERSON Jenn L [<mailto:PETERSON.Jenn@deq.state.or.us>]
Sent: Friday, July 11, 2014 11:24 AM
To: Shephard, Burt
Cc: Koch, Kristine
Subject: RE: Portland Harbor PRG DDX Problem

Thanks Burt. This specific response is to the surface water RAO, but the arguments made in favor of dropping are the avian dietary / egg risk to DDX. Adding the sediment DDE PRG back into the table for piscivorous birds will correct the problem.

For aluminum, apparently EPA has not approved Oregon criteria, and this is on hold until the number is addressed nationally. However, in the interim for upland screening of GASCO groundwater, we are using the National Ambient Water Criteria (87 ug/L freshwater chronic, expressed as total for waters pH 6.5-9). NW Natural agreed to use this number in the risk assessment.

Is EPA not using NAWQ for aluminum for Portland Harbor until the NAWQ are revised to address the hardness issue? Since it is a risk driver for upland groundwater, upland soil, and was detected in elevated concentrations in in-water media (e.g. TZW, sediment) it would be good to coordinate on a number that EPA and DEQ agree on if possible. It would be great if you and Bob could work on this – I believe this would be much more effective than not assessing it due to concerns with the SLV. Let me know if I can assist in any way.

Thanks again for your time Wed.,

Jennifer

From: Shephard, Burt [<mailto:Shephard.Burt@epa.gov>]
Sent: Thursday, July 10, 2014 4:41 PM
To: PETERSON Jenn L
Cc: Koch, Kristine
Subject: RE: Portland Harbor PRG DDX Problem

Jen,

(b) (6) she strongly agrees with us that just because something screens out in the in-water risk assessments doesn't automatically mean that LWG can screen out or drop that same chemical from upland sites (or presumably source control, although we didn't specifically talk about source control). It's a wrong position for LWG or individual PRPs to take on multiple levels. Glad we're also on the same page regarding BSAF assumptions and that DDE doesn't drop out of the avian lines of evidence in the in-water BERA. I'm forwarding this to Kristine, hopefully it's nothing more than a miscommunication about different chemical forms of DDX and what should and shouldn't drop out of the PRG table.

Regarding your aluminum concerns, I'm sure that between Bob Gensemer and I we could give you some free consulting on how to pull together an aluminum water quality TRV that would be appropriate to the upland and groundwater conditions, relative to the existing EPA water quality criteria for aluminum. Meant to ask you, is aluminum listed in Oregon's water quality standards? If so you could argue it's an ARAR, since unlike EPA criteria, Oregon's water quality standards can be legally enforced.

Best regards,

Burt Shephard
Risk Evaluation Unit
Office of Environmental Assessment (OEA-095)
U.S. Environmental Protection Agency, Region 10
1200 6th Avenue
Seattle, WA 98101

Telephone: (206) 553-6359
Fax: (206) 553-0119

e-mail: Shephard.Burt@epa.gov

"Facts are stubborn things"
- John Adams

From: PETERSON Jenn L [<mailto:PETERSON.Jenn@deq.state.or.us>]
Sent: Thursday, July 10, 2014 4:16 PM
To: Shephard, Burt
Subject: Portland Harbor PRG DDX Problem

Burt,

Please see the LWG's comments in the attached document: "2014-06-19 Att 1 COCs and PRGs Issue Statement. Pdf" regarding the DDX / DDE issue we discussed yesterday. I have cut out the DDX text in the file "DDX PRG Problem". The LWG is arguing that since DDX screens out they don't have to carry it forward, but as we discussed **DDE does not** and this PRG needs to be put back into the table.

Thanks for all the great discussion yesterday! Please call if you need help getting this resolved.

Jennifer

From: Koch, Kristine [<mailto:Koch.Kristine@epa.gov>]

Sent: Tuesday, July 08, 2014 9:30 AM

To: LIVERMAN Alex; Allen, Elizabeth; Audie Huber (audiehuber@ctuir.com); Bob Dexter; Brian Cunninghame (cunninghame@gorge.net); callie@ridolfi.com; Coffey, Scott; Conley, Alanna; Erin Madden (erin.madden@gmail.com); Fuentes, Rene; Gail Fricano (gfricano@indecon.com); Genevieve Angle (Genevieve.Angle@noaa.gov); Hagerman, Paul; Holly Partridge (Holly.Partridge@grandronde.org); JD Williams (jd@williamsjohnsonlaw.com); PETERSON Jenn L; Jeremy_Buck@fws.gov; Julie Weis (jweis@hk-law.com); Matt Johnson (matt@williamsjohnsonlaw.com); MCCLINCY Matt; Michael.karnosh@grandronde.org; POULSEN Mike; Muza, Richard; rdelvecchio@indecon.com DelVecchio; Robert.Neely@noaa.gov; rose@yakamafish-nsn.gov; Ryan Sudbury (Ryan.Sudbury@grandronde.org); Sheldrake, Sean; Shephard, Burt; Todd King (KingTW@cdmsmith.com); tomd@ctsi.nsn.us; GAINER Tom

Subject: FW: LWG Comments on Revised FS Section 2

FYI..

Kristine Koch
Remedial Project Manager
USEPA, Office of Environmental Cleanup

U. S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900, M/S ECL-115
Seattle, Washington 98101-3140

(206)553-6705
(206)553-0124 (fax)
1-800-424-4372 extension 6705 (M-F, 8-4 Pacific Time, only)

From: Jennifer Woronets [<mailto:jworonets@anchoragea.com>]

Sent: Thursday, June 19, 2014 2:46 PM

To: Koch, Kristine

Cc: Jennifer Woronets; Carl Stivers; Amanda Shellenberger; Jim McKenna (jim.mckenna@verdantllc.com); Patty Dost; Bob Wyatt; Sheldrake, Sean; Muza, Richard; King, Todd W.

Subject: LWG Comments on Revised FS Section 2

Kristine,

Please find attached a submittal that addresses those portions of Section 2 of the revised FS for which EPA has indicated discussions have concluded and on which it is commencing to draft the revised text. Portions of this submittal also address two outstanding EPA information requests from the FS "Draft Actions Items Lists" that is updated and sent to you on Friday's including:

- LWG to propose alternative method for calculating Dioxin/Furan TEQ PRG for RAO 2 (see Attachment 3, Section 5).
- LWG to propose alternative Mn ecological water toxicity value (see Attachment 1, Section 5).

We sincerely hope that all this information will be valuable to EPA as it undertakes the process of revising Section 2. Please contact Bob Wyatt if you want to discuss any issue we have raised here.

Thank you,
Jen Woronets ©
Anchor QEA, LLC
jworonets@anchoragea.com
421 SW Sixth Avenue, Suite 750
Portland, OR 97204
503-972-5014

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